

## **Structured Medical Documentation - Proof of economical profitability For the product MediColor by MEDNOVO**

**Efficiency optimisation along the treatment processes in hospitals is of high importance. In times of economy measures, it is necessary for hospitals to improve processes, to find out and to convert specifically saving and efficiency increasing potentials.**

**Well known is the assumption that computer-assisted systems make the course of treatment more effective and therefore, savings can be achieved. Up to now, there were hardly any conducted surveys about this assumption. MEDNOVO Medical Software Solutions GmbH and the Klinikum Magdeburg gemeinnützige GmbH have aimed together at proving the economical profitability of the installation of the program MediColor in the endoscopy/sonography in the Klinikum Magdeburg.**

**The results are unequivocal. Besides the proof of the long-term cost-savings, the further optimisation possibilities were worked out clearly for the Klinikum Magdeburg.**

**Read in the following the results of the study and the clear piece of evidence of the work and cost relief by the introduction of MediColor - the system for the structured medical documentation.**

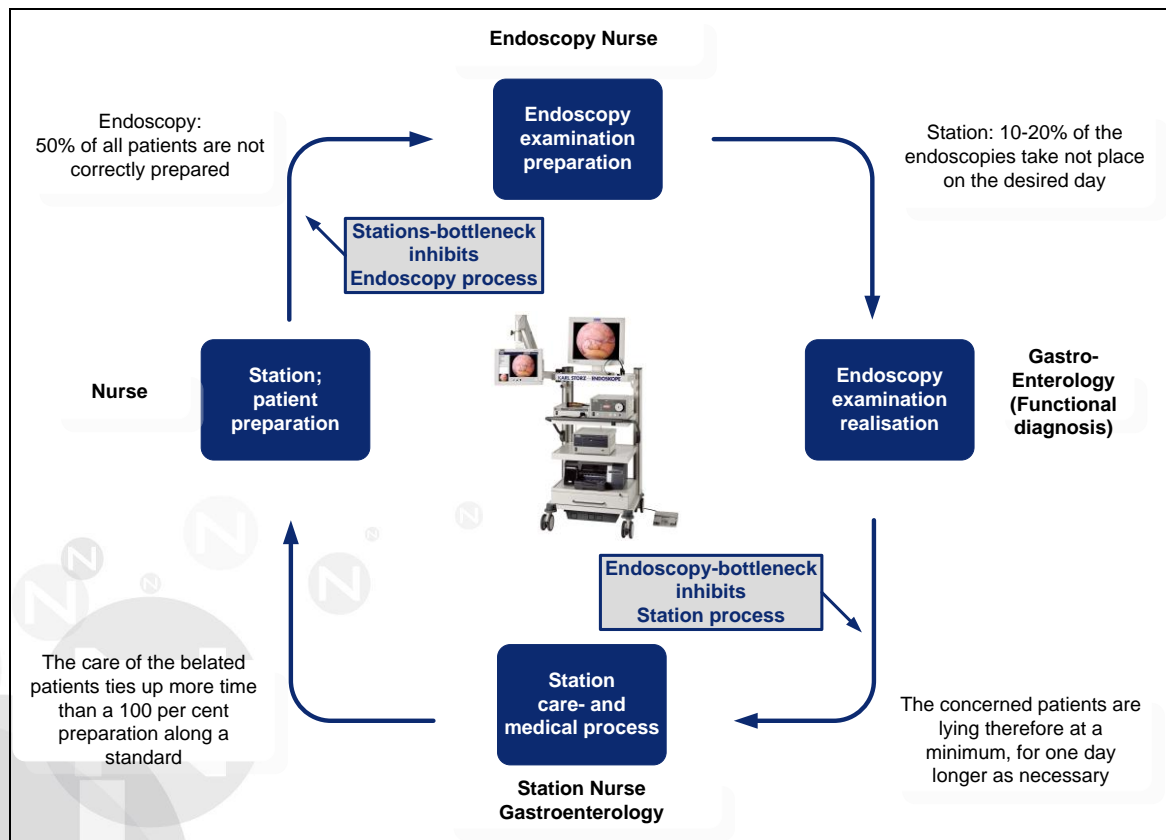
### **Initial situation:**

MEDNOVO Medical Software Solutions GmbH offers with MediColor software for the image and diagnosis documentation. Since 2008, the Klinikum Magdeburg uses the medical documentation system in the endoscopy and sonography. But now it was time, to find out, how far the investment in MediColor has been profitable and that not only subjectively considered, but also how far the feeling of job facilitation, increase of time saving and the optimisation of the workflow can be expressed and be proofed in financial ratios.

### **Today's bottleneck:**

The integration of IT and medical engineering, in the form in which MEDNOVO and the Klinikum Magdeburg gemeinnützige GmbH cooperate since 2008, makes it possible to abolish bottlenecks which lead to additional costs, time pressure and waste of staff capacities. These bottlenecks demand for action, which was converted by MediColor in a solution.

Exemplary bottlenecks, which occur often in the endoscopy, are represented in the following tableau.



Source: Dr. Dirk Ralfs; Analysis of costs and benefits, Return-on-Invest and Break-Even-Analysis for MediColor along the endoscopy process in the Klinikum Magdeburg; July 2009

### **Ambitious of survey:**

Both MEDNOVO GmbH and the Klinikum Magdeburg gemeinnützige GmbH aimed to have clear and honest ratios, which prove the success of the implementation of the medical documentation system.

The questions, which were critically examined in the context of this survey, are:

- Which increased efficiency with clearly provable key financial ratios could be gained along the complete treatment process by the documentation system MediColor?
- Which further efficiency increasing potentials can be filtered out by optimal coordination of processes and software?
- Is a provable increase of the user satisfaction reached by IT-usage-optimisation?

**The results:**

**1. Realised job-facilitation by improvement in efficiency**

By the take-over of patient data and access to pre-findings due to an interface to the HIS and PACS, a noticeable job-facilitation and a reduction of the time expenditure is made by increased efficiency. Due to the image integration into the medical findings, the significance of the results has increased on the one hand and on the other hand repetition examinations are avoided. The increased significance leads also to a reduction of comment requirement on the station and from the referring physician. The complete digital recording of the services rendered to the individual cases leads to a faultless settlement possibility.

	Before			Is (Current)			
	Frequentness / number / frequency	Process time (1-n employee)	Price in €	Frequentness / number / frequency	Process time (1-n employee)	Qualification / role	Price in €
<b>Endoscopy and Sonography</b>							
Preparation device (with/without worklist)	2.000	3	0,41	2.000	1	Nurse	0,41
Print of images (material costs)	6.700	2	1	6.700	1	PCE	0,40
Generation of finding	6.700	6	0,80	6.700	3	ASS	0,80
Telephone call with required / referred physicians	2.000	4	0,80	1.000	4	ASS	0,80
<b>Sum of process advantage</b>							

As visible in the chart above, the process time is reduced for all mentioned administrative activities along the treatment process even up to more than 50% by the installation of MediColor. Indeed, the processing time remains the same in the context of the telephone calls between hospital and referring physician, but the number of necessary telephone calls is even reduced by half by the increased significance of the results.

The result: Efforts and costs are reduced enormously. These in turn can be besieged, whereby new optimisation potentials result.

## 2. Further optimisation potential

Beside the already underlined savings and efficiency increasing factors along the treatment process, another requirement on the survey existed, which is to name additional optimisation potential by the integration of MediColor.

Endoscopy and Sonography	Is (Current)			Demand value				
	Frequentness / number/ frequency	Process time (1-n employee)	Price in €	Frequentness / number/ frequency	Reference parameter (per requirement, Case,	Process time (1-n employee)	Qualification/ role	Price in €
Arrangement of dates / Priorities discussion station with Endo/Sono	1.895	4	0,41	632	EXA	4	NURS	0,41
Running coordination patients transport	6.316	2	0,41	6.316	EXA	1	NURS	0,41
Print of images (material costs)	6.701	1	0,40	6.701	EXA	0	PCE	0,40
Print / filing of stationary finding	6.316	3	0,41	6.316	EXA	1,5	NURS	0,41
Print / filing ambulatory finding	385	3	0,41	385	EXA	0	NURS	0,41
Signature stationary finding	6.316	1	0,80	6.316	EXA	0,5	ASS	0,80
Signature ambulatory finding	385	1	0,80	385	EXA	0,5	ASS	0,80
Generation ambulatory physicians letter(Cover letter)	385	5	0,80	385	EXA	1	ASS	0,80
Communication finding (Paper/HIS)	250	20	0,28	250	DAY	40	AP	0,28
<b>Sum of process advantage</b>								

By the digital preparation of the data and their availability on all MediColor work stations, the number of coordination of dates can be reduced by all up to 60%, even if the time for processing, per case, remains the same. An improved commissioning of the patient transport, ad acta of the stationary results and signature for the ambulatory results by rearrangement to batch processing, leads to a process time reduction of 50%. Based on the process restructure optimisation and the batch processing, the distribution of the results would be carried out only once-daily what results in a rise of process time. . But the savings at the administrative processes (commissioning of the patient transport, ad acta of the stationary results and signature for the ambulatory results) are because of the position of the executing persons (ASS and NURS) considerably higher, as the additional costs, which causes the additional process time in the context of the findings-communication.

**Result:**

The analysis which was conducted by MEDNOVO GmbH and the Klinikum Magdeburg gemeinnützige GmbH provides a clear piece of evidence for what kind of economy measures of monetary and humane capacities can be obtained by an optimal networking of IT and medical engineering. The Klinikum Magdeburg also plans a successive rearrangement of the further optimisation potential worked out to realise even more improvement on the workflow and the satisfaction of the users.

With this analysis, MEDNOVO and the Klinikum Magdeburg have initiated a profitability analysis which is transferrable to any random hospital.

